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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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Dirk Kempthorne, Governor
Toni Hardesty, Director

October 19, 2005

Mr. Nolan Jensen, FFA/CO Project Manager
Environmental Restoration Program
U.S. Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, Idaho 83415

Re: OU 7-13/14 Draft Baseline Risk Assessment

Dear Mr. Jensen:

Thank you for the informative meeting on October 12 regarding the progress that has been made on the development of the draft Baseline Risk Assessment for OU 7-13/14. Substantial progress has been made on refining the modeling since the development of the Ancillary Basis for Risk Assessment (ABRA) with further efforts currently underway to refine the source release modeling for Tc-99. Preliminary results are anticipated for discussion with the agencies in about two weeks. The revision in the Tc-99 modeling will probably spread the release of the Tc-99 over a much longer period of time such that Tc-99 will no longer be a large contributor to the pre-1,000 year cumulative ground water risk estimates. Thus, the cumulative groundwater risk is likely to increase in the 1,000 to 10,000 year timeframe.

DEQ also noted the restoration time frame appears to be lengthening for OU 7-08 (OCVZ) based on the presentation of vapor phase transport and remedial goals for carbon tetrachloride. DEQ understands this work is still under development and has not been finalized.

Therefore, DEQ wishes to re-clarify our position on the presentation of risk for all pathways, especially for the ground water pathway in the forthcoming Baseline Risk Assessment that will be submitted to the agencies in December 2005. Specifically, the presentation of risk in a graphical format should not be terminated at 1,000 years but should be presented to peak risk or out to 10,000 years. DEQ agrees that modeling results incur greater uncertainty with the extended time frames noted, especially because of an inability to calibrate the model; nevertheless, modeling provides the only tool available to the agencies to look into the future for the possible impacts of the contaminants on the environment both pre-remedial action and as a tool to assess the effectiveness of potential remedies. The modeling results certainly warrant a thorough

discussion of the uncertainties associated with the modeling and predictions of contaminant transport into the future.

Although the ABRA was not submitted nor received by the agencies as the official RI/BRA, it has been placed in the Administrative Record. Presenting the modeling results through 10,000 years in the upcoming draft RI/BRA will demonstrate the agencies desire to present the full picture to the public whereas not continuing the format used in the ABRA may bring unwanted questions from the public because of significant changes between these documents regarding cumulative risk and risk drivers. Modeling to 10,000 years for those contaminants expected to reach maximum concentrations at a very distant point in the future (Np-237, uranium isotopes (U-233, -234, -235, 236, and -238, Pa-231, and Ac-227) is indeed part of the guidance protocol for performing cumulative risk assessments at the INL.

Graphical presentation of risk can be presented for appropriate groups of contaminants such as the mobile contaminants Tc-99, I-129, and Cl-36. Less mobile contaminants such as the uranium isotopes can be lumped together but a graph is still necessary to present the cumulative risk over time posed by all relevant contaminants for a given pathway such as ground water. Obviously, the Feasibility Study (FS) should present the modeling results in a format comparable to the BRA. Uncertainties associated with FS modeling are greater than with the BRA and should be discussed accordingly. Presenting results through 10,000 years in the BRA and FS will allow decision makers to make a more informed decision than if the results are terminated at 1,000 years.

Sincerely,

Daryl F. Koch
FFA/CO Manager
Waste Management and Remediation Division

DFK/jc

cc: Nicholas Ceto, U.S. EPA Region 10, Richland, WA
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